

REMOTE LASER BEAM DELIVERY SYSTEM AND METHOD FOR USE WITH
A ROBOTIC POSITIONING SYSTEM FOR ULTRASONIC TESTING
PURPOSES

ABSTRACT

The invention is directed to an ultrasonic testing system. The system tests a manufactured part for various physical attributes, including specific flaws, defects, or composition of materials. The part can be housed in a gantry system that holds the part stable. An energy generator illuminates the part with energy and the part emanates energy from that illumination. Based on the emanations from the part, the system can determine precisely where the part is in free space. The energy illumination device and the receptor have a predetermined relationship in free space. This means the location of the illumination mechanism and the reception mechanism is known. Additionally, the coordinates of the actual testing device also have a predetermined relationship to the illumination device, the reception device, or both.